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10/595,209	03/24/2006	Berthold Austrup	PAT-01083	7431
26922	7590	01/29/2009	EXAMINER	
BASF CORPORATION Patent Department 1609 BIDDLE AVENUE MAIN BUILDING WYANDOTTE, MI 48192			DOLLINGER, MICHAEL M	
			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/595,209	Applicant(s) AUSTRUP ET AL.	
	Examiner MICHAEL DOLLINGER	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>03/24/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. The requirement for restriction in the Office Action filed 15 August 2008 has been withdrawn in the interest of expedited prosecution.

Claim Objections

2. Claims 4 and 5 are objected to because of the following informalities: in line 1 these claims refer to “any of claim 1”. The phrase “any of” should be removed. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 13 recites a component (D) but does not define what component (D) is. As such, the proper metes and bounds of the claim cannot be clearly ascertained and the claim is deemed to be vague.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6, 8-11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilke et al (WO 02/079290, hereinafter national stage US 7,297,723 B2 is referred to as an English language equivalent).

7. Wilke et al disclose powder slurries which can be hardened thermally and with actinic radiation and comprising solid and/or highly viscous particles dimensionally stable under storage conditions comprising (A) a binder free of carbon-carbon double bonds activatable with actinic radiation, comprising at least one (meth)acrylate copolymer containing on average per molecule at least one isocyanate-reactive functional group and at least one ion-forming group, (B) at least one blocked and/or part-blocked polyisocyanate, and (C) at least one olefinically unsaturated constituent which is free of isocyanate-reactive functional groups and contains on average per molecule more than four carbon-carbon double bonds activatable with actinic radiation [abstract]. The constituent (C) may contain blocked isocyanate groups [column 17 lines 1-4] wherein the blocking group may be a substituted pyrazole [column 16 line 41] particularly 3,5-dimethylpyrazole [column 28 line 43]. Examples of suitable isocyanate-reactive functional groups are thiol, hydroxyl and primary and secondary amino groups, especially hydroxyl groups [column 8 lines 29-31]. The (meth)acrylate copolymer (A) has a glass transition temperature between -40 and +80°C and preferably below room temperature [column 8 lines 34-41]. The constituent (C) contains double bonds provided by (meth)acryloyl, ethacryloyl, crotonate, cinnamate, vinyl ether, vinyl ester

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and others [column 17 lines 9-17], and preferably (meth)acryloyl [column 17 lines 17-18]. The composition relates to coating materials, adhesives and sealing compounds [column 1 lines 17-20] and more particularly to clearcoat materials and color and/or effect coating materials [column 1 lines 21-24]. The powder slurry may be prepared by a secondary dispersion process comprising (I) emulsifying an organic solution comprising the constituents (A), (B), and (C) and, optionally, a thickener (D), to give an emulsion of the oil-in-water type, (II) removing organic solvent that may be present, and (III) replacing at least a portion of the volume of solvent removed by water, to give the powder slurry [claim 18].

8. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Baumgart et al (WO03/000812, hereinafter national stage US 7,064,165 B2 is referred to as an English language equivalent).

9. Baumgart et al disclose coating materials which may be powder slurries [column 19 lines 38-45] and are curable thermally and with actinic radiation comprising (A) at least one binder containing isocyanate reactive functional groups [column 2 lines 64-65] and (B) a crosslinking component comprising (i) free and/or blocked isocyanate groups and (ii) reactive functional groups containing at least one bond which can be activated with actinic radiation [column 2 line 66 through column 3 line 2]. The binder (A) is preferably a (meth)acrylate copolymer [column 3 lines 61-63] which has a glass transition temperature preferably between -15 to +30°C [column 7 lines 22-23]. Examples of suitable isocyanate-reactive functional groups are hydroxyl, thiol, and

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primary and secondary amino groups, especially hydroxyl group [column 3 lines 33-35]. A preferred crosslinker includes at least two blocked isocyanate groups [column 8 lines 46-48; column 8 lines 59-61] and at least two reactive functional groups activated with actinic radiation [column 8 lines 49-51; column 8 lines 62-64]. A suitable blocking agent for the isocyanate groups includes dimethyl pyrazole [column 11 line 20]. The crosslinker (B) may also be hydrophilically modified by incorporating ionic groups such as carboxylate groups into the molecule [column 16 lines 34-39]. The suitable double bonds may be (meth)acrylate, ethacrylate, crotonate, cinnamate, vinyl ether, vinyl ester and others [column 11 lines 37-45] and preferably (meth)acrylate groups [column 11 lines 45-48]. (Meth)acrylate groups read on (meth)acryloyl groups. The composition is suitable for coating materials [abstract], adhesive or sealing compound [claim 20], and clearcoats, color and/or effect coatings [claim 15]. The disclosed crosslinker (B) reads on the claimed components (B) and (C).

10. Regarding claim 6, Baumgart et al disclose dimethyl pyrazole as a blocking agent [column 11 line 20]. There are only six dimethyl pyrazole compounds (differing in the position of the methyl groups), so one of ordinary skill in the art would have at once envisaged all the compounds implied by the disclosure of dimethyl pyrazole, including 3,5-dimethylpyrazole. If one of ordinary skill in the art is able to "at once envisage" the specific compound within the generic chemical formula, the compound is anticipated. *In re Petering*, 301 F.2d 676, 133 USPQ 275 (CCPA 1962).

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11. Claims 1-6 and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Baumgart et al (DE 10041635 A, hereinafter patent family member US 2004/0014881 A1 is referred to as an English language equivalent).

12. Baumgart et al disclose a one component system curable with heat and actinic radiation [abstract] which include powder slurry coating materials [0105] comprising (A) at least one crosslinking agent whose molecule contains on average at least one blocked isocyanate group and at least one functional group having at least one bond which may be activated with actinic radiation, and (B) at least one binder containing on average at least one isocyanate-reactive functional group in the molecule [abstract].

The component (A) preferably contains at least two blocked isocyanate [0019] wherein the blocking agent is chosen from a list including dimethyl pyrazoles [0036]. The crosslinker (A) preferably contains at least two functional groups having at least one bond which may be activated with actinic radiation [0038] and suitable double bonds include (meth)acrylate, ethacrylate, crotonate, cinnamate, vinyl ether, vinyl ester and others and preferably (meth)acrylate groups [0040]. The binder (B) is preferably a (meth)acrylate copolymer [0064] and examples of suitable isocyanate-reactive functional groups are hydroxyl, thiol and/or primary and/or secondary amino groups, especially hydroxyl groups [0048]. The composition may be used as a coating material, adhesive or sealing compound [abstract] and may also be used as a solid color topcoat or clearcoat [claim 14]. The disclosed crosslinking agent (A) reads on the both claimed components (B) and (C).

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13. Regarding claim 2, the glass transition temperature is an inherent property of a polymer dependent on its structural components. Since all of the structural limitations of the claimed binder (A) are met by the binder (B) disclosed in Baumgart et al, the glass transition temperature is held to be inherently present in the binder (B) of Baumgart et al.

14. Regarding claim 6, Baumgart et al disclose dimethyl pyrazole as a blocking agent [0036]. There are only six dimethyl pyrazole compounds (differing in the position of the methyl groups), so one of ordinary skill in the art would have at once envisaged all the compounds implied by the disclosure of dimethyl pyrazole, including 3,5-dimethylpyrazole. If one of ordinary skill in the art is able to “at once envisage” the specific compound within the generic chemical formula, the compound is anticipated. *In re Petering*, 301 F.2d 676, 133 USPQ 275 (CCPA 1962).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

17. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilke et al (WO 02/079290, hereinafter national stage US 7,297,723 B2 is referred to as an English language equivalent) in view of Baumgart et al (WO03/000812, hereinafter national stage US 7,064,165 B2 is referred to as an English language equivalent).

18. Wilke et al, discussed above, do not disclose the constituent (C) with hydrophilic groups. Wilke et al do disclose, however, that the composition is powder slurries (aqueous powder dispersions).

19. Baumgart et al, discussed above, do disclose the crosslinker (B) with hydrophilic groups incorporated into the molecule. Baumgart et al teach that these hydrophilic groups make the crosslinker suitable for aqueous coating materials [column 16 lines 34-39].

20. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have prepared a powder slurry coating composition with a (meth)acrylate copolymer binder, blocked polyisocyanate and an olefinically unsaturated, pyrazole blocked isocyanate functional compound with hydrophilic groups because Wilke et al teach that it is within the skill of the art to prepare a powder slurry coating composition with a (meth)acrylate copolymer binder, blocked polyisocyanate and an olefinically unsaturated, pyrazole blocked isocyanate functional compound and Baumgart et al teach that it is within the skill of the art to prepare a powder slurry coating composition with a (meth)acrylate copolymer binder, blocked polyisocyanate

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and an olefinically unsaturated, pyrazole blocked isocyanate functional compound modified with hydrophilic groups. One would have been motivated to modify the compound of Wilke et al with hydrophilic groups because Baumgart et al teach that the hydrophilic modification makes the compounds suitable for aqueous dispersion. Absent any evidence to the contrary, there would have been a reasonable expectation of success in hydrophilically modifying the olefinically unsaturated, pyrazole blocked isocyanate functional compound of Wilke et al.

International Search Report

21. DE-A-10143414, cited as an X category reference on the International Search Report for PCT/EP2004/052813, was not used in a 35 USC § 102 reference because the polyacrylate binder (II) corresponding to the claimed binder (A) is in a separate coating layer from the components corresponding to the claimed components (B) and (C).

22. WO-A-02079334, cited as an X category reference on the International Search Report for PCT/EP2004/052813, was not used in a 35 USC § 102 reference because the solid particles (II) corresponding to the claimed component (C) contains an isocyanate-reactive functional group.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL DOLLINGER whose telephone number is

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(571)270-5464. The examiner can normally be reached on Monday - Thursday
7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MICHAEL DOLLINGER
Examiner
Art Unit 1796

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